ABSTRACT OF THE DISCLOSURE

An encryption mixer transforms the intensity values of image signals in a predetermined area, specified by an area specifier, based on encryption data from an encryption data generator. To do so, for an odd-numbered line and an even-numbered line in the predetermined area, the encryption mixer calculates the average of the intensity values of the image signals in the even-numbered line and compares the average with the intensity value of each pixel in the odd-numbered line. The encryption mixer increments CNT_{posi} by 1 when the average is smaller, and increments CNT_{nega} by 1 when the average is larger. Then, the encryption mixer modifies the intensity values of the image signals in the odd-numbered line such that $CNT_{posi} > CNT_{nega}$ when the bit to be embedded is "1" and such that $CNT_{posi} < CNT_{nega}$ when the bit to be embedded is "0".